

Code for "US Public Debt and Safe Asset Market Power"

Jason Choi, Rishabh Kirpalani, and Diego Perez

November 2024

** MOD files **

monopoly.mod: This is the baseline model with monopoly equilibrium. Table 4. Table 7.

competitive.mod: Solve for competitive equilibrium and welfare from transition. Table 5. Table 6.

nobenefit.mod: Solve for monopoly equilibrium with no special role for US debt, and welfare from transition. Table 6.

cournot1.mod: Solve for cournot equilibrium with one player, transition paths, and welfare changes. Table 7.

cournot2.mod: Solve for cournot equilibrium with two players, transition paths, and welfare changes. Table 7.

cournot3.mod: Solve for cournot equilibrium with three players, transition paths, and welfare changes. Table 7.

fringe_monopoly.mod: Solve for domestic fringe competition equilibrium and welfare changes from transition. Table 7.

fringe_competitive.mod: Solve for domestic fringe competition equilibrium and welfare from transition.

fringe_nobenefit.mod: Solve for domestic fringe competition equilibrium with no special role for US debt, and welfare from transition.

monopoly_altbenefit.mod: This is the baseline model with monopoly equilibrium - using the alternative benefit function.

monopoly_beta.mod: Solve for time-varying elasticity monopoly model, generate regression and model matching.

monopoly_etaH.mod: Solve for monopoly model with high demand elasticity.

monopoly_etaL.mod: Solve for monopoly model with low demand elasticity.

monopoly_lambdaH.mod: Solve for monopoly model with high supply elasticity.

monopoly_lambdaL.mod: Solve for monopoly model with low supply elasticity.

competitive_altbenefit.mod: Solve for competitive equilibrium and welfare from transition - using the alternative benefit function.

competitive_beta.mod: Solve for time-varying elasticity competitive model, generate regression and model matching.

competitive_etaH.mod: Solve for competitive model with high demand elasticity.

competitive_etaL.mod: Solve for competitive model with low demand elasticity.

competitive_lambdaH.mod: Solve for competitive model with high supply elasticity.

competitive_lambdaL.mod: Solve for competitive model with low supply elasticity.

nobenefit_altbenefit.mod: Solve monopoly equilibrium with no special role for US debt - using the alternative benefit function.

** MATLAB files **

calibration.m: Calibrates the baseline parameters. Table 3 & Table 4.

calibration_altbenefit.m: Calibrates the alternative benefit function model.

func_moments.m: Wrapper for moment matching solver for baseline model. Used in calibration.m.

func_moments_altbenefit.m: Wrapper for moment matching solver for alternative benefit model. Used in calibration_altbenefit.m.

df_obj.m: Solves the steady state of Domestic Fringe model. Used in fringe_monopoly.mod.

dfce_obj.m: Solves the steady state of Domestic Fringe model. Used in fringe_competitive.mod.

func_ireland.m: Wrapper for moment matching solver for alternative benefit models.

tsls.m: Performs 2SLS IV

plot_fig2.m: Plots Figure 2 in paper.
plot_figB1.m: Plots Figure B.1 in paper.
plot_figB2B3.m: Plots Figures B.1 and Figure B.2 in paper.
plot_figB4.m: Plots Figures B4 in paper.
plot_figC2.m: Plots Figures C2 in paper.
plot_figC3.m: Plots Figures C3 in paper.
print_quant.m: Generates all quantitative section results and tex files.

**** Python file ****

empirical.ipynb: Python notebook that generates all the empirical sections and appendix material. See section headings in notebook.

**** CSV/XLSX files (Below are data files use by empirical.ipynb)****

ba_cd.csv: data for bonds and commercial paper yields for robustness
Bank-data.csv: data for savings, time, and demand deposits
dep_rat_a.csv: data for annual dependency ratio
fed_deficit.csv: data for federal govt deficit and surplus
fof_1120b_q.csv: data for investor type of treasury holdings from Fed flow of funds
gdpdef.csv: data for US GDP deflator
gov_exp.csv: data for US gov expenditures
gsb.csv: data for US gov benefit transfers
mspiukm.csv: data for UK stock volatility
savingsl.csv: data for savings accounts (for interpolating bank-data.csv)
stdsl.csv: data for time accounts (for interpolating bank-data.csv)
tedsl.csv: data for demand accounts (for interpolating bank-data.csv)
tic.csv: data for outstanding treasury from Treasury Bulletin
uk_debt.csv: data for UK fiscal debt
uk_gdp.csv: data for UK GDP
uk_gdp2.xlsx: data for UK real GDP
popoulation.txt: data for US population
Tax rate Data_v3.xlsx: corporate and individual tax rates for US
ftse.xlsx: data on UK FTSE index
TVR.xlsx: stores data on VIX and EPU
rawdata.xlsx: headline variables in one file for access
quarterly.dta: stores all the baseline variables in one file

**** MAT files ****

All mat files are saved solutions from the dynare mod files.